

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-34 (Canceled).

35. (Currently amended) A method for producing a metal nano-powder comprising:

(a) forming an alloy comprising a first metal and a second metal that is different from the first metal;

(b) subjecting the alloy to a leaching agent effective to leach out the second metal and form a metal nano-powder;

(c) washing and filtering the metal nano-powder;

(d) drying the washed and filtered metal nano-powder;

~~(e)~~ (e) coating the dried metal nano-powder with a chemical reagent to form a coated metal nano-powder; and

~~(d)~~ (f) de-agglomerating the coated metal nano-powder.

36. (Original) A method according to claim 35 further comprising thermally treating the alloy prior to leaching.

37. (Original) A method according to claim 36 comprising thermally treating the alloy at a temperature between 460 and 610°C.

38. (Original) A method according to claim 35 further comprising cold working the alloy to create thin strips comprising the alloy prior to leaching.

39. (Original) A method according to claim 38 further comprising thermally treating the alloy prior to cold working.

40. (Original) A method according to claim 39 comprising thermally treating the alloy at a temperature of about 400°C.

41. (Original) A method according to claim 35 wherein the chemical reagent is selected from the group consisting of sorbitan esters, polyoxyethylene esters, alcohols, glycerin, polyglycols, organic acid, organic acid salts, organic acid esters, thiols, phosphines, low molecular weight polymers, and combinations thereof.

42. (Original) A method according to claim 35 further comprising de-agglomerating the coated metal nano-powder using a jet mill.

43. (Withdrawn) A method according to claim 35 further comprising de-agglomerating the coated metal nano-powder using a mechanical disperser, a mechanical homogenizer, an ultrasonic homogenizer, or combination thereof.

44. (Original) A method according to claim 35 wherein the first metal is selected from the group consisting of silver, copper, nickel, cobalt, titanium, palladium, platinum, gold, iridium, and combinations thereof.

45. (Original) A method according to claim 35 wherein the second metal is selected from the group consisting of aluminum, zinc, magnesium, tin, copper, and silver.

46. (Original) A method according to claim 35 wherein the leaching agent is selected from the group consisting of sodium hydroxide, potassium hydroxide, and combinations thereof.

47. (Withdrawn) A method according to claim 35 wherein the leaching agent is selected from the group consisting of acetic acid, hydrochloric acid, formic acid, sulfuric acid, nitric acid, hydrofluoric acid, and combinations thereof.

48. (Original) A method according to claim 35 wherein the metal nano-powder comprises an alloy.

49. (Original) A method according to claim 45 wherein the metal nano-powder comprises an alloy of silver and at least one other metal element selected from Group I, Group IV, Group V, Group VI, Group VII, and Group VIII of the Periodic Table of Elements.

50. (Original) A method according to claim 35 comprising coating the metal nano-powder with at least two different chemical reagents.

51. (Currently amended) A method for producing a metal nano-powder comprising:

- (a) forming an alloy comprising a first metal and a second metal that is different from the first metal;
- (b) subjecting the alloy to a first thermal treatment to form a thermally treated alloy;
- (c) cold working the thermally treated alloy to form thin strips comprising the alloy;
- (d) subjecting the thin strips to a second thermal treatment to form thermally treated thin strips comprising the alloy;
- (e) subjecting the thermally treated thin strips to a leaching agent effective to leach out the second metal to form a metal nano-powder;
- (f) washing, filtering, and then drying the metal nano-powder;
- (g) coating the dried metal nano-powder with a chemical reagent to form a coated metal nano-powder; and
- (h) de-agglomerating the coated metal nano-powder.

52. (Original) A coated metal nano-powder prepared according to the method of claim 35.

53. (Original) A coated metal nano-powder prepared according to the method of claim 51.

54. (New) A method for producing a metal nano-powder comprising:

(a) forming an alloy comprising a first metal and a second metal that is different from the first metal;

(b) subjecting the alloy to a leaching agent effective to leach out the second metal and form a metal nano-powder;

(c) coating the metal nano-powder with 1-5 wt.%, based upon the weight of the metal, of a chemical reagent to form a coated metal nano-powder; and

(d) de-agglomerating the coated metal nano-powder.

55. (New) A method according to claim 54 comprising coating the metal nano-powder with (a) 1-5 wt.%, based upon the weight of the metal, of a primary chemical reagent and (b) 0.1-2.5 wt.%, based upon the weight of the metal, of a secondary chemical reagent to form the coated metal nano-powder.